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NEWSLETTER OF THE LONDON CHAPTER
ONTARIO ARCHAEOLOGICAL SOCIETY

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PUBLIC ARCHAEOLOGY AT FORT MIAMIS

Dr. Michael Pratt of Heidelberg College will be travelling all the way from Ohio to present this month's talk! Mike should have plenty of slides and anecdotes about his experiences over the last few years directing Toledo area public excavations.

Barring blizzard conditions, we hope to see a good turnout next Thursday (March 8, 8:00 P.M.) at the Museum of Indian Archaeology. Bring a friend to hear this interesting presentation!

EXECUTIVE REPORT

A combination of abnormal snow conditions and common colds prevented a February 29 executive meeting. Nevertheless, communications were received from all of our Chapter executive concerning their recent activities. Rob reports that a formal written proposal to host the 1985 O.A.S. Symposium in London has been sent to Toronto and will be considered by the provincial executive this month. Our executive have also applied in writing to the provincial body for a $200.00 operating grant. The Chapter has been requested to provide a representative to sit on the O.A.S. Ontario Heritage Act review committee in Toronto. Those interested in participating should contact Rob at 225-2300.

So far as other Chapter activities such as the fish weir and bus trip are concerned, there is nothing further to report at present - but keep them in mind! Our treasurer reports that we are still working in the black (despite rising costs) and to prove it, his 1983 financial report is presented below.

SOCIAL REPORT

Response to our activity questionnaire has been good to date. Preliminary results indicate that there is a great deal of interest in a week long October bus tour to the Washington, D.C. area. Other suggested destinations included New York state, Pennsylvania, the upper Mississippi region and the Coronation

House in Windsor. The majority of respondents will attend a Chapter picnic, preferably in June. Longwoods Conservation Area was a popular location and we even received an invitation from the L.T.V.C.A. to return there this year. Other suggestions were a combined London - Waterloo Chapter picnic northeast of London or holding the picnic in the Gibbs' back yard.

Membership participation on Chapter field projects should be good this season, except those people situated too distant to commute (i.e. Toronto, Mount Forest). Most seemed prepared to return to excavations on the Harrietsville village and to continue the Dorchester Swamp Survey - with the exception of a certain Windsor respondent who suggested that we must be kidding! Finally, other suggested Chapter activities include: flint knapping workshops, artifact photography training sessions and Peachy's.

In other news, the Chapter has recently obtained 25 signed copies of Dr. Gerald Killan's excellent David Boyle biography, entitled: *David Boyle From Artisan to Archaeologist*. These publications are being offered at the special price of $13.00 to Chapter members only, on a first come first serve basis. They can be obtained while supplies last by sending a cheque or money order for $14.00 (including postage) payable to the "Ontario Archaeological Society London Chapter" at 55 Centre Street, London, Ontario. Any remaining copies will be on sale at this month's Chapter meeting.

Sales of KEWA back issues continue. Nineteen copies were sold at the recent McMaster Symposium, as well as three Chapter memberships! Our thanks to Christine and Neal for sharing the sales table duties (even during the paper presentations!).

As of publication time, we have yet to receive our next archaeological puzzle - Peter, you've ruined Mary's week! Our readers will just have to be satisfied with the answer to last month's quizz, which is..... SIDEY NOTCHED.

Membership response to last month's research article has been excellent, so that our readers have been saved from chert flakes for the moment..... but don't be complacent, there are plenty more lithic articles "in the wings"! Where are those promised papers Gary, Mark, Dave and Neal?

A NATIVE CERAMIC VESSEL FROM OWEN SOUND

JANIE E. RAVENHURST

During September of 1981 the fragmentary remains of a Native ceramic vessel were turned over to Mr. Ron Williamson at the Longwoods Adventure display in the Wsstern Fair. The sherds constituted the major portion of a small vessel which had been excavated from the grey clay bottom of the Pottawatomi River in Owen Sound (see Figure 1). Subsequently, the remains were turned over to the Ministry where they have since been cleaned, stabilized and reconstructed.

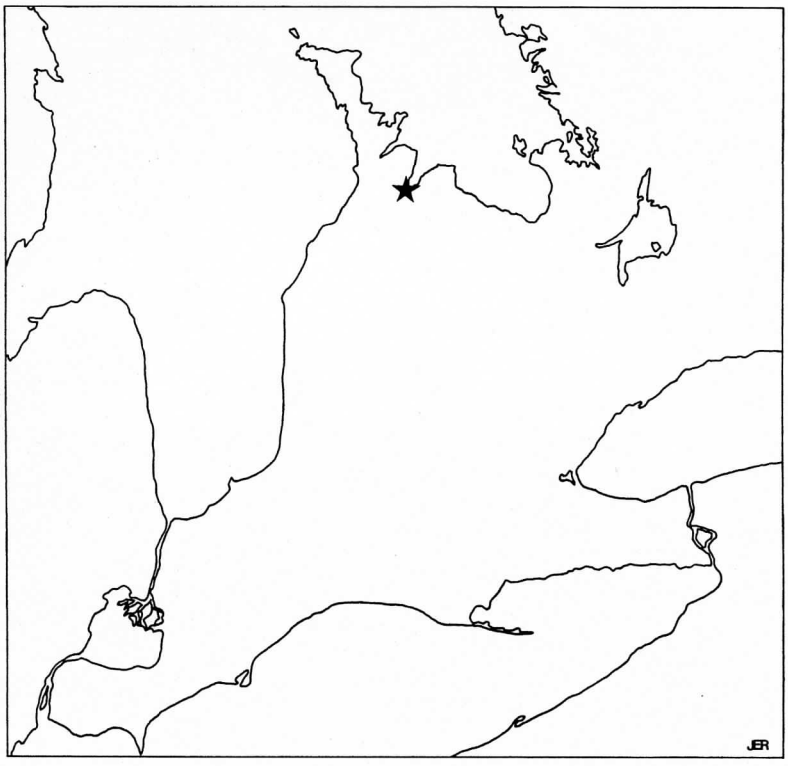

Figure 1: Location of the Ceramic Vessel Discovery

The body of the vessel is quite badly broken, but the entire turret castellated rim was recovered. Unfortunately, water erosion over the centuries has rendered the decorations barely visible. Vessel height is 125 mm; maximum shoulder diameter is 130 mm; neck diameter is 85 - 91 mm; the exterior rim diameter is 93 - 102 mm; lip thickness is 3 - 4 mm; collar height is 11 mm; the collar base thickness is 5 - 6 mm; castellation height is 24 mm; and body sherd thickness ranges between 2 - 4 mm with an average of 3 mm (see Figure 2

Body form is basically globular. An encircling channel runs around the lower neck of the vessel, just above the shoulder. This channel is 8 mm wide and 1.5 mm deep. Above and below this channel are destral oblique incisions averaging 8 mm in length. The well developed overhanging collar is basically vertical with a slight outward flaring at the lip. Oblique sinistral incisions occur on the collar to the right of the castellation (see Figure 2). To the left of the castellation, the incised obliques run in a distral direction. The castellation is of the turret type with 3 incisions running vertically down its face. On the smoothed neck just below the collar are two horizontal dentate stamped lines.

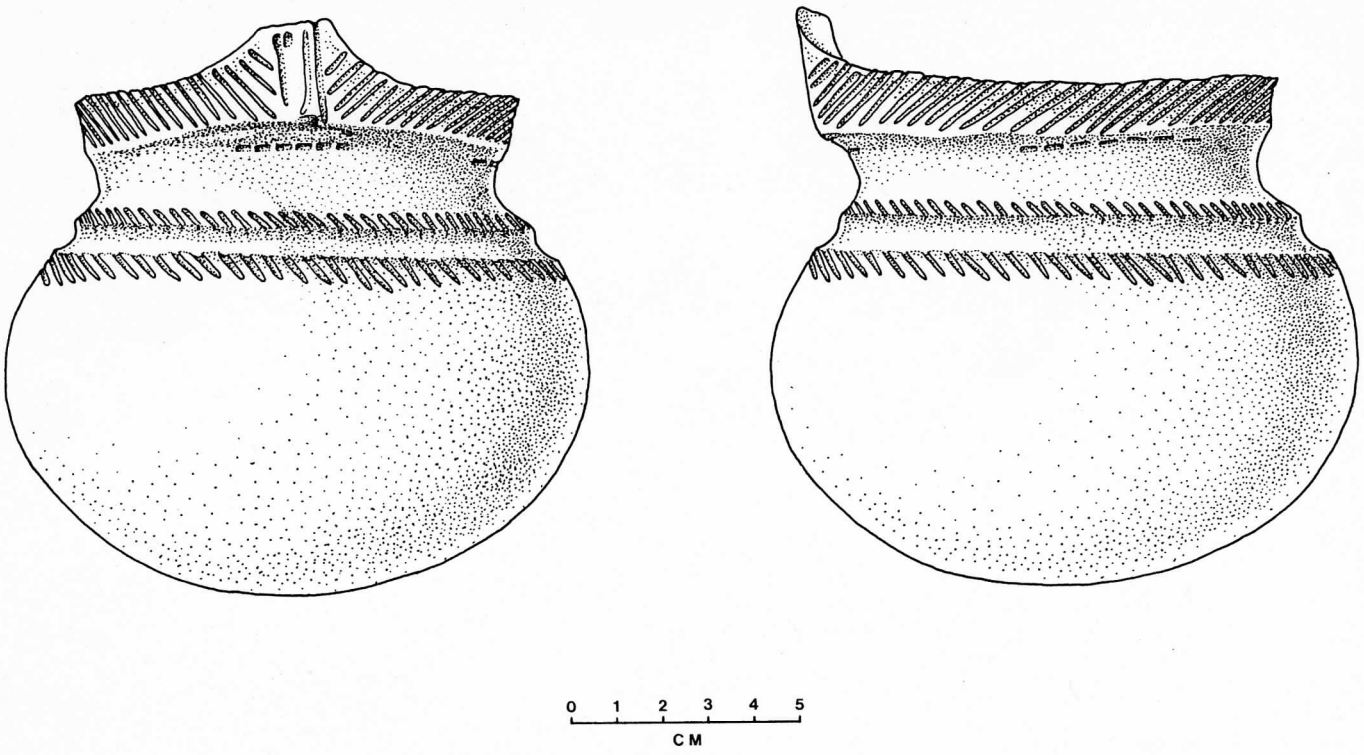

Figure 2: Illustration of the Vessel as Manufactured

Tempering size is variable ranging from 2.5 mm to < 0.5 mm and includes quartz, muscovite mica and hornblende. The paste of the vessel is well-knit and laminated. Finally, carbonized material was noted adhering to sections of the collar interior.

Discussion

The globular shape, shoulder channel, turret castellation and horizontal lines on the neck are almost exactly mirrored in a vessel recovered from the Ball Site which dates to 1610 - 1615 A.D. (Knight 1978: Figure 5). Knight (1978: 59) postulated these channelled shoulder vessels "suggest eastern contact from the St. Lawrence Valley". This is based on Wintemberg's Roebuck site recoveries; however, only roughly 7 of approximately 4,888 vessels had encircling channelled shoulders (Wintemberg 1972: 39). Two vessels out of the 151 recovered from the c. 1590 A.D. Thomas site (Donaldson 1962: 35) have similar channelled shoulders. As well, vessels with the turret type castellations are also reported for the latter site.

The dentate stamping on the neck of our vessel is very unique for ceramics dating from c. 1590 - 1615 A.D. During the Middle Woodland Period (c. 300 B.C. - A.D. 500) dentate stamping was at its height of popularity. By A.D. 1300, this technique went out of use among the ancestral Huron Pickering groups. Why it appears on a c. 1600 A.D. vessel is difficult to say.

The Bruce Peninsula has been documented as being occupied by the Odawa (Cheveux Relevés) during the early seventeenth century (Heidenreich 1971: Map 15). Champlain encountered the Odawa in a winter village near Collingwood in February of 1616 (Garrad 1970). Considering the form and decoration of our vessel, one could argue that it is Petun or Huron; however, the vessel is quite small, and on the average, the Petun and Huron vessels are much larger (Wright 1981: 55). The unique dentate stamping may be a further example of the Odawa (Algonkians) retaining older

decorative techniques (Mitchell 1975: 66 and Wright 1981: 55).

Conclusion

Very little is known archaeologically about the Odawa peoples. This may be due to their nomadic nature (Feest 1978 and Wright 1981: 58) resulting in small, insubstantial sites. Fitzgerald (1979) feels that the temporary nature of at least warm season Odawa sites explains the relatively poor retrieval of their cultural remains. While only an isolated find at present, this small c. 1600 A.D vessel adds to our limited understanding of the seventeenth century Odawa occupation of the Bruce Peninsula area.

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WAS THAT MIDDLEPORT NECKED OR POUND OBLIQUE? A STUDY IN IROQUOIAN CERAMIC TYPOLOGY

PAUL LENNOX AND IAN KENYON

Introduction

As every archaeologist is familiar with the classification of their materials to facilitate the communication of their findings to other researchers, we are also familiar with the frustration that accompanies this task, particularly where the extant classification system is inadequately described. Even when the existing system is well defined and easily accounts for most of our assemblage, there is inevitably a number of specimens that transcend the boundaries of two distinct artifact types and, as lumpers rather than splitters, force the analyst into a decision Such is the nature of the beast.

The decision making that accompanies classification is of little consequence in purely descriptive reporting however, if not in the same report, at some future date, the reliability (or more aptly the comparability) of various analyses becomes critical to interpretation. We don't all make the same decisions, and even worse, we are rarely explicit about the decisions that we do make.

The Problem

During the 1983 field season, archaeological survey undertaken by the Ontario Ministry of Transportation and Communications in the area of a proposed highway interchange south of the City of Barrie, Ontario identified and led to the salvage excavation of threatened portions of the Wiacek site, a small (2 acre) Iroquoian hamlet. While awaiting the results of C14 analysis, the site is broadly identified as a "Late Middleport" component.

In preparing the report of the Wiacek excavations the merits of the recent ceramic type versus attribute controversy (cf Wright 1966, 1967, 1974, 1979; Pratt 1960, 1976) are acknowledged and ceramic attributes are presented (Lennox, Dodd and Murphy 1984). At present however, existing comparative attribute analyses are sporadic in their spatial and temporal representation. Ramsden's extensive study (1977) provided attribute data for a large but generally later and more southern sector of the Late Ontario Iroquois Stage, while Kapches' (1981) examination of Middleport understandably only presents detailed attribute analyses for those sites of the Markham focus which formed the basis of that study. Even if attribute analyses were available for every comparable site excavated, the variability of the analyses and reporting would render much of the data incompatible.

At this transitional phase between the traditional typological approach and

while building a repertoire of promising attribute studies, many of our needs will have to be met by the more consistently and widely available analytical format found in the typological approach. With exactly this dilemma close to heart, a typological classification of the Wiacek vessels was initiated.

In classifying the Wiacek rimsherds according to MacNeish's typology the subtle differences between a number of ceramic types were noted and considerable effort was required to sort out these differences to my own satisfaction and within the bounds set by the typology. Particular difficulty was encountered distinguishing Ontario Horizontal, Middleport Oblique, Pound Necked and Black Necked ceramic types which appear to describe a temporal and stylistic continuum. In the following paragraphs the types' modal forms, as initially defined, and the intergradations and relationships between these are described with reference to the Wiacek assemblage.

The Types

Ontario Horizontal Diagnostic features of this type include horizontal lines on short channelled collars which tend to be poorly to well defined on early and late examples, respectively (MacNeish 1952: 16). In addition, it is noted that early variants often have vertical or oblique gashes above and/or below the horizontal lines, while late types are more inclined to have ovoid notches at the base of the collar. Necks are weakly constricted and collar development is more pronounced in later times (MacNeish 1952: 16). Wright (1966: 43) regards Ontario Horizontal as predominantly a Middle Ontario Iroquois Stage type.

The 7 Wiacek specimens follow the type definitions closely. Collars are weakly defined, ovoid notches and rarely gashes are common below and/or above the horizontal elements. Oblique impressions on the lips and interior occur sporadically in the sample.

Middleport Oblique According to the type definition "The most common motif is parallel oblique incised lines or gashes on the upper rim with horizontal lines on the lower rim and neck. Rims are slightly outflaring and have a poorly defined collar. Necks are very slightly constricted" (MacNeish 1952: 17). While other variants are noted, the above accounts for all of the Wiacek rims assigned to this type except one collarless example. Middleport Oblique pottery has a temporal distribution that is very much restricted to the Middle Ontario Iroquois Stage (MacNeish 1952: 17, Wright 1966: 137, 145, 148) and along with Ontario Horizontal it is considered as a diagnostic of the Middleport Substage (Wright 1966: 61).

It is notable that MacNeish (1952: 17) sees the Middleport Oblique types as developing from Ontario Oblique. To the contrary, the differences between Ontario Horizontal and Middleport Oblique seem minute. Both possess nearly identical motifs and differ principally in the vertical scale of the motif and in collar development. As such, Middleport Oblique shows closest affinities to Ontario Horizontal and conceivably constitutes a Middle Ontario Iroquois Stage type variant. Though both types occur contemporaneously and are popular during this period, Ontario Horizontal extends bi-directionally beyond this stage apparently having its origins in the Pickering Branch (cf Wright 1966: Table 1 and Table 12).

Lastly, and substantiating their similarity, there appears to be some difficulty in distinguishing the two pottery types. Wright (1969: 61) for example notes that

the combination of types; Middleport Oblique, Ontario Horizontal and Lawson Incised, dominate ceramic assemblages of the Middleport substage and that the combined high frequency of the three types, and not just the dominant position of any one of the three types may be regarded as one of the diagnostics of the Middleport substage. Does this imply that the relative frequency of the two types under study vary unsystematically through time or does this tendency also point out the problem of observer error? On the same note, Kapches' (1981: 251) presentation of the Simcoe focus Middleport data derived from Ridley's notes and personal observation of some of the collections (Kapches 1981: 249), indicates a high frequency of Ontario Horizontal rims to the virtual exclusion of Middleport Oblique rims. We concur that the two types are difficult to distinguish. In the case of the Wiacek sample, the distinction was based principally on collar development.

Pound Necked As originally defined "The most distinctive features of the type are the horizontal incisions encircling the neck, coupled with oblique or vertical incisions on short poorly-defined, channelled collars." (MacNeish 1952: 15).

Pound Necked is a late Middleport type that reaches its greatest frequency during the time of the occupation of the Pound site (MacNeish 1952: 15), and continues into the Late Ontario Iroquois Stage where in the Huron sequence it is replaced by Black Necked. Pound Necked very closely resembles Ontario Horizontal and Middleport Oblique types and is best regarded as the third temporal and stylistic member of this typological continuum. The major distinction between Middleport Oblique and Pound Necked is a slight variation in the location of the motif with respect to the collar-necked juncture. Middleport Oblique sherds include obliques over one or more horizontal elements on the collar with the horizontal elements continuing onto the neck. On Pound Necked sherds the entire collar of the vessel is taken up with the oblique elements while the horizontal elements begin just below the juncture of the collar and neck and continue on down the neck. It is interesting in this regard to note that Pound Necked collars in the Wiacek sample are slightly shorter ($\bar{x}$ = 12.4 mm) than those on Middleport Oblique rims ($\bar{x}$ = 16.2 mm) and it is perhaps this single attribute that underlies the variation between types.

Black Necked This type is a late Middle to early Late Ontario Iroquois Stage type which lingers on into historic times (MacNeish 1952: 36). The type develops out of and replaces, Pound Necked rims within the Huron series, but is largely absent from sites of the Neutral series in Southwestern Ontario (cf Wright 1966: Table 15-20, pg. 147-151, MacNeish Fig. 7, pg. 13 and Fig. 10, pg. 30).

With regard to the motif and form of the type, MacNeish (1952: 36) notes that:

> "Most of this type have opposed triangles filled with oblique lines on the neck; a few have only horizontal incisions on the neck. On the collars there is a variety of decorations consisting of vertical or oblique lines, opposed triangles filled with oblique lines, horizontal lines with or without basal collar notches, notches at the top and bottom of the collar, and oblique lines crossed by a broken or unbroken horizontal line. There as a tendency for the inner rim to be flat, though almost as many are convex."

In comparing Black Necked rims from the Wiacek site to MacNeish's type definition, one should keep in mind that the earliest site in his examination of

Huron wares, and that which likely heavily influenced his definition, was the Black Creek site after which the pottery type is named. The Black Creek site represents an early Late Ontario Iroquois Stage component occupied later than the Wiacek site. Wright (1966: 101) suggests a date of approximately 1500 A.D. for the Black Creek site. As such, the Wiacek specimens may be considered as representing some of the earliest examples of the type.

Thirteen rims classified as Black Necked from the Wiacek site may be divided into two subgroups. The first and largest subgroup containing 10 rims best fits MacNeish's type definition above. All exhibit convex rim interiors and rather well developed collars. Eight of these exhibit collar motifs consisting of parallel obliques or verticals, or parallel obliques above a horizontal trailed line. All eight rims possess trailed horizontal neck motifs and thus represent a minority variant according to the type definition. Many of these would otherwise be classified as Middleport Oblique or Pound Necked types except for their convex interior profile. The remaining two rims in the first group have neck motifs composed of parallel oblique lines (likely opposed triangles), and thus represent the most common variant according to MacNeish's definition.

The second subgroup is composed of three rimsherds which exhibit parallel oblique (1) and opposed triangular (2) collar motifs and neck motifs of opposed triangles filled with oblique lines. These rims all possess concave interiors, which do not appear under the MacNeish type definition but are exhibited by his referenced profiles and illustrated type examples (1952: 93, Fig. 24, No. 90 and 121, Plate XII, Nos.1, 3, 4, 6, 8).

It is notable that Black Necked rims at Wiacek include more of the rarer variants than suggested by the type definition. This assemblage appears to illustrate the early configuration of the type variants and seems to substantiate the type's derivation from Pound Necked, as well as the other earlier types.

The above considerations help illustrate some of the difficulties encountered in classifying the Wiacek ceramic assemblage and these same problems have no doubt been variously resolved by other researchers. Similar problems are discussed by Emerson (1968) and White (1961). Of particular note, because of their bearing on the following analysis, are descrepancies pointed out by White (1961: 77) in interpreting interior rim form, a distinguishing characteristic between Lawson Incised and Opposed versus Huron Incised types. As a result of variable interpretations of interior rim form, White's reexamination of sherds that MacNeish also typed from the Buffum St. site resulted in the classification of 41% as Lawson Incised and 24% as Huron Incised (White 1961: 95); whereas, MacNeish reports 59% Lawson Incised and only 1% Huron Incised (MacNeish 1952: 12, 21).

Method

The above considerations and realizations resulted in a feeling of confidence regarding the classification of the Wiacek rims, but raised a concern for the comparability of these data. Had other researchers made similar decisions? It would appear not.

Ideally the Wiacek site should be compared to other Middleport and early post-Middleport assemblages from the local area, in an attempt to understand its social and chronological position within this sequence. While numerous Middle and Late

Ontario Iroquois Stage sites are known in the area, none have been extensively sampled and/or adequately reported. At best, Wiacek can only be compared to similarly dated assemblages from elsewhere in the province.

Given this state of affairs, 30 sites (see Figure 1 and Table 1) from Southern Ontario for which reliable sample sizes and typological analyses exist were chosen for comparison with the Wiacek assemblage. In addition to these data, multiple analyses are available for several sites, consisting of either two researchers' analyses of the same assemblage or analyses of different assemblages from the same site.

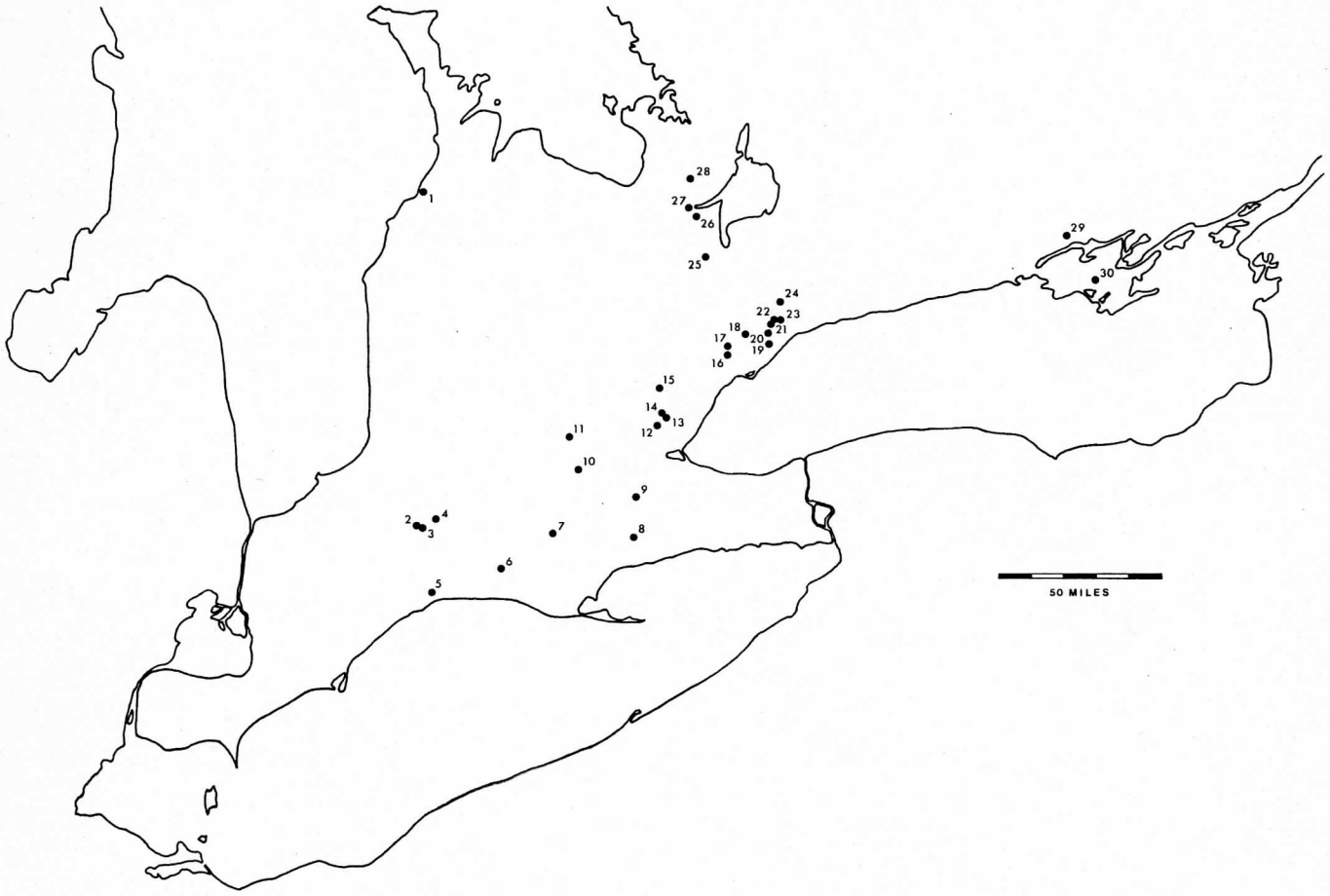

Figure 1: Study Site Distribution

1. Nodwell
2. Edwards
3. Drumholm
4. Lawson
5. Southwold
6. Pound
7. Uren
8. Slack - Caswell
9. Middleport
10. Perry
11. Moyer
12. Bennett
13. Pipeline
14. Crawford Lake
15. Milton
16. Black Creek
17. Parsons
18. Doncaster
19. Thomson
20. Elliott
21. Robb
22. New
23. Milroy
24. Draper
25. Bosomworth
26. Wiacek
27. Barrie
28. Copeland
29. Lite
30. Payne

Table 1: Site Abbreviations and Data Sources

Site	Data Source
Barrie (BAR)	Wright 1966: 146
Bennett (BEN)	Wright 1966: 149
Black Creek (BLC)	Wright 1966: 148
Bosomworth (BOS)	Wright 1966: 150
Copeland (COP)	Wright 1966: 149
Crawford Lake (CRA)	Busby 1979: 110
Doncaster (DON)	Wright 1966: 148
Draper (DRA)	Wright 1966: 148
Drumholm (DRU)	Pearce 1982: 35
Edwards (EDW)	Pearce 1982: 35
Elliot (ELL)	Kapches 1981: 183
Lawson (LAW)	Wright 1966: 151
Lite (LIT)	Pendergast 1972: 56
Middleport (MID)	Wright 1966: 147
Milton (MIL)	Busby 1979: 107
Millroy (M - W)	Wright 1966: 147
Milroy (M - K)	Kapches 1981: 183
Moyer (MOY)	Jamieson 1979: 36
New (NEW)	Kapches 1981: 183
Nodwell (NOD)	Wright 1974: 240
Parsons (PAR)	Wright 1966: 148
Payne (P - E/ P - P)	Emerson 1968: 82
Perry (PER)	Kapches 1981: 267
Pipeline (PIP)	Busby 1979: 107
Pound (POU)	Wright 1966: 147
Robb (R - K)	Kapches 1981: 183
Robb (R - W)	Wright 1966: 147
Slack - Caswell (SLC)	Jamieson 1979: 36
Southwold (SOU)	Wright 1966: 151
Thomson (THO)	Kapches 1981: 183
Uren (URE)	Wright 1966: 146
Wiacek (W)	Lennox, Dodd and Murphy: n.d.

With these comparative data in mind and in an attempt to appreciate some of the problems inherent in the analysis of ceramic types, a sherd of each vessel rim from the Wiacek site was provided to each of 2 other researchers for typological classification. We might add that these two additional analyses were conducted rather hastily, but by experienced Iroquoian ceramicists with the aid of appropriate references, such that the variations between the ceramic type frequencies likely represent real problem areas.

In the following section the 30 sites will be examined using cluster analysis, the multianalyst sites being treated as if the different analyses were from separate sites (in a better controlled context, this might be considered as a variant of the so-called split sample technique, which is used to gauge the reliability of sample data). Hence there are 35 pottery type samples. Ideally, these "split-samples" should cluster together. Of course, a site should resemble itself, but, as we shall see, this is not always the case, observer error introducing

differences where none exist. So in the following section, it is important to keep track of the changing relationships of the multianalyst sites, for these intrasite differences will provide a crude measure of the reliability of both ceramic type analysis and clustering methods.

Hierarchial cluster analysis has been used by a number of archaeologists to investigate the relationships among Ontario Iroquois sites. Cluster analysis is principally a method of data reduction, transforming unmanagably large tables of numbers into simpler and presumably more understandable dendrograms (Everitt 1974, and Sneath & Sokal, 1973, provide useful discussions of cluster analysis). Like any other quantitative technique, you only get out of the analysis what you put in. Since in this case what is put in is the percentages of 24 pottery types, with all their attendant observer error, it is not surprising to find that the results are not very useful (see Figure 2) and indeed somewhat confusing, for the same site may be found in different clusters. Most notably the Milroy (Kapches) site seems to have little relationship to the Milroy (Wright) site. Less extreme, but still showing a marked discrepancy, is the placement of the "two" Robb sites. The Robb (Kapches) site clusters quite tightly with Milroy (Wright) as well as with one analyst's version of Wiacek, but Robb (Wright) appears as an outlier not closely connected to any other sample. It is reassuring, however, to find that the Payne site is very similar to itself. Although in a loose sense the clusters sometimes group sites of similar age, the dendrogram of Figure 2 cannot be said to inspire great confidence in the "scientific method".

The problem here should be clear enough by now: sites are different from one another not only because they have different artifacts but also because they have different investigators. As discussed earlier, observer error tends to occur only among certain types that have intergrading and overlapping attributes. There are groups of types that are difficult to differentiate (e.g. Black Necked - Pound Necked - Middleport Oblique; Lawson Incised - Huron Incised). The analysis of the Wiacek rims and the 24-type cluster analysis focused our attention on these problem types, and suggested an experiment to answer the question: What would happen if one lumped together these "difficult" types and then proceeded with a cluster analysis as before? Figure 3 displays the result of clustering the sites using only 7 ceramic classes composed of the following types:

1. Ontario Horizontal, Iroquois Linear.
2. Middleport Oblique, Pound Necked, Black Necked, Middleport Criss - Cross.
3. Lawson Incised, Huron Incised, Lawson Opposed, Sidey Crossed, Warminster Horizontal, Sidey Notched, Copeland Incised, Pound Blank, Warminster Crossed.
4. Ontario Oblique.
5. Lalonde High Collar.
6. Seed Incised, Ripley Plain, Ripley Collared, Niagara Collared.
7. Bossed Scugog Punctate, Glen Meyer Linear Stamped, Uren Noded.

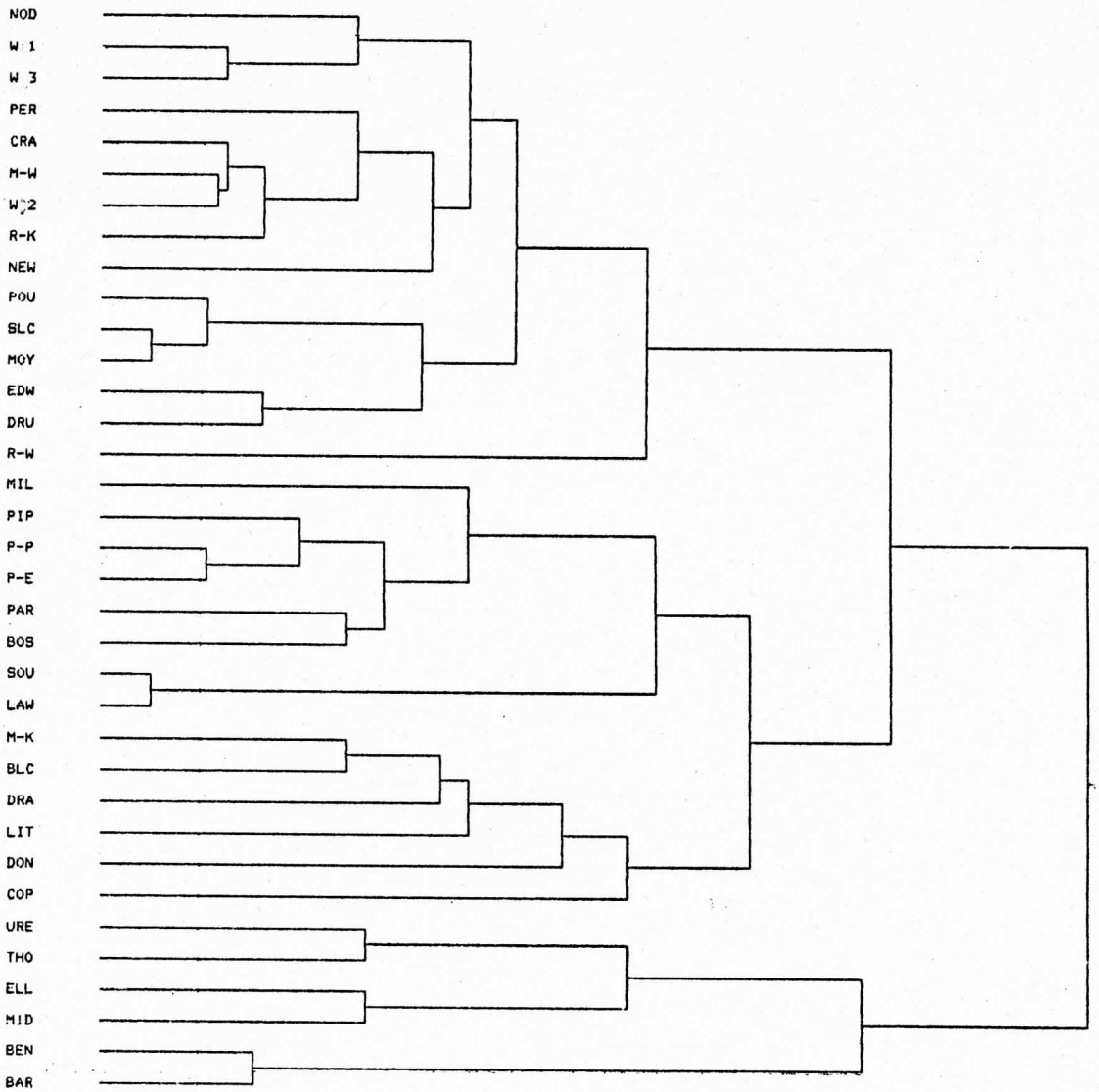

Figure 2: Group Average Cluster Analysis Using 24 Types.

(In this and the following two figures, the Brainerd-Robinson coefficient of the similarity has been employed. In the analysis, miscellaneous rims - those that are either untyped or types found only on one site - have been eliminated and the remaining type percentages recalculated to total 100%. Site name abbreviations and data sources are detailed in Table 1)

The first three classes represent groupings of types that our experience suggests are prone to observer error (also thrown in are a few minor types such as Warminster Crossed and Warminster Horizontal - cluster analyses with these types separated out show no significant differences with the results given in Figure 3). The last two classes are "catchalls", with group no. 6 representing undecorated or lightly decorated rims and group no. 7 some early "Pickmeyer" types. The above 7 classes can not be considered as optimal groupings of types, for there is an evident arbitrariness in the list. Certainly many other, add possibly better, arrangements can be made. But such simplifications allow us to look at a set of

data in a different way, ideally minimizing observer error.

Despite the loss of information that must necessarily occur because of this rather drastic lumping of types, the results of the cluster analysis (see Figure 3) are much more interpretable than that produced by using 24 separate types. Not only is the clustering structure tighter - the dendrogram has almost a textbook form - but also the multianalyst sites begin to cluster with themselves. Notably, the two Milroys cluster fairly closely, and the Robb (Wright) site is no longer an outlier. Only the two Paynes are pulled somewhat apart by this lumping process. There is one curious difference between the two cluster analyses. In the 24-type dendrogram (see Figure 2), Wiacek #3 clusters tightly with Wiacek #1, but in the 7-type analysis it clusters with Wiacek #2 - the reasons for this continue to be a matter of mutual recriminations.

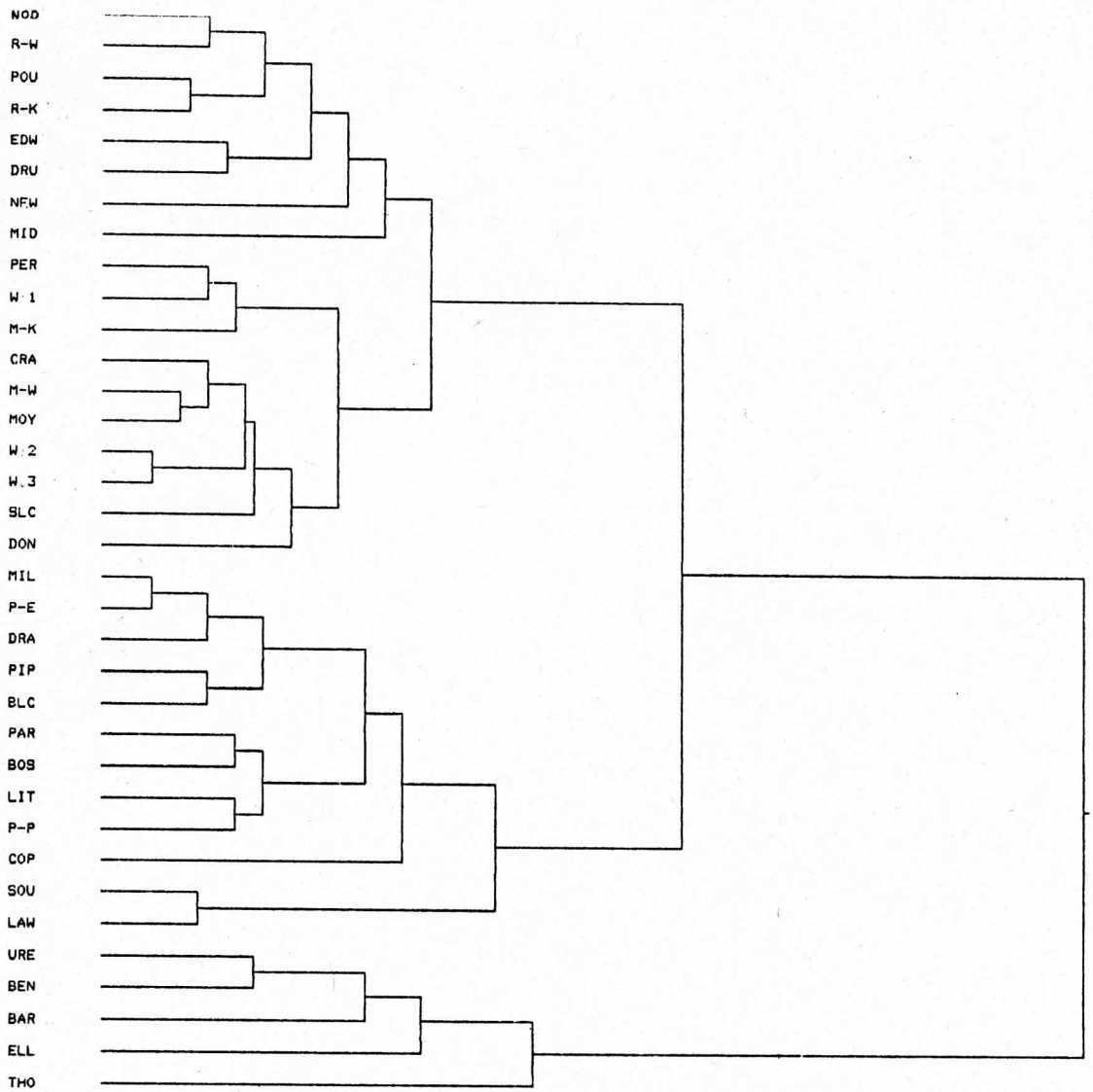

Figure 3: Group Average Cluster Analysis Using 7 Type Classes.
(The constituent types of each class are listed in the text)

But if such a lumping of types produces reasonably interpretable results, why not go a step further? Toss out all but the first three classes (nos. 1 to 3 as listed above), for it is only these three that have large percentages, and entirely drop the other four classes from the analysis (recalculating the percentages of the retained classes so they total 100%). Despite so cavalierly ignoring 9 types, the 3-type cluster analysis (see Figure 4) is virtually identical to the 7-type one. But with only a three variable data set, it is not a very meaningful exercise to calculate the cluster analysis dendrogram. A more efficient method of displaying this data set is to plot the sites on a triangular co-ordinate graph (see Figure 5) with each pole representing one of the three ceramic type groupings. The broken lines on this graph encircle four site clusters, as suggested by the dendgrograms of Figure 3 and 4. As discussed below, there appears to be some archaeological reality behind these four site clusters; however, the relative position of sites within these clusters may be unreliable, as indicated by the variable placements of the multianalyst sites.

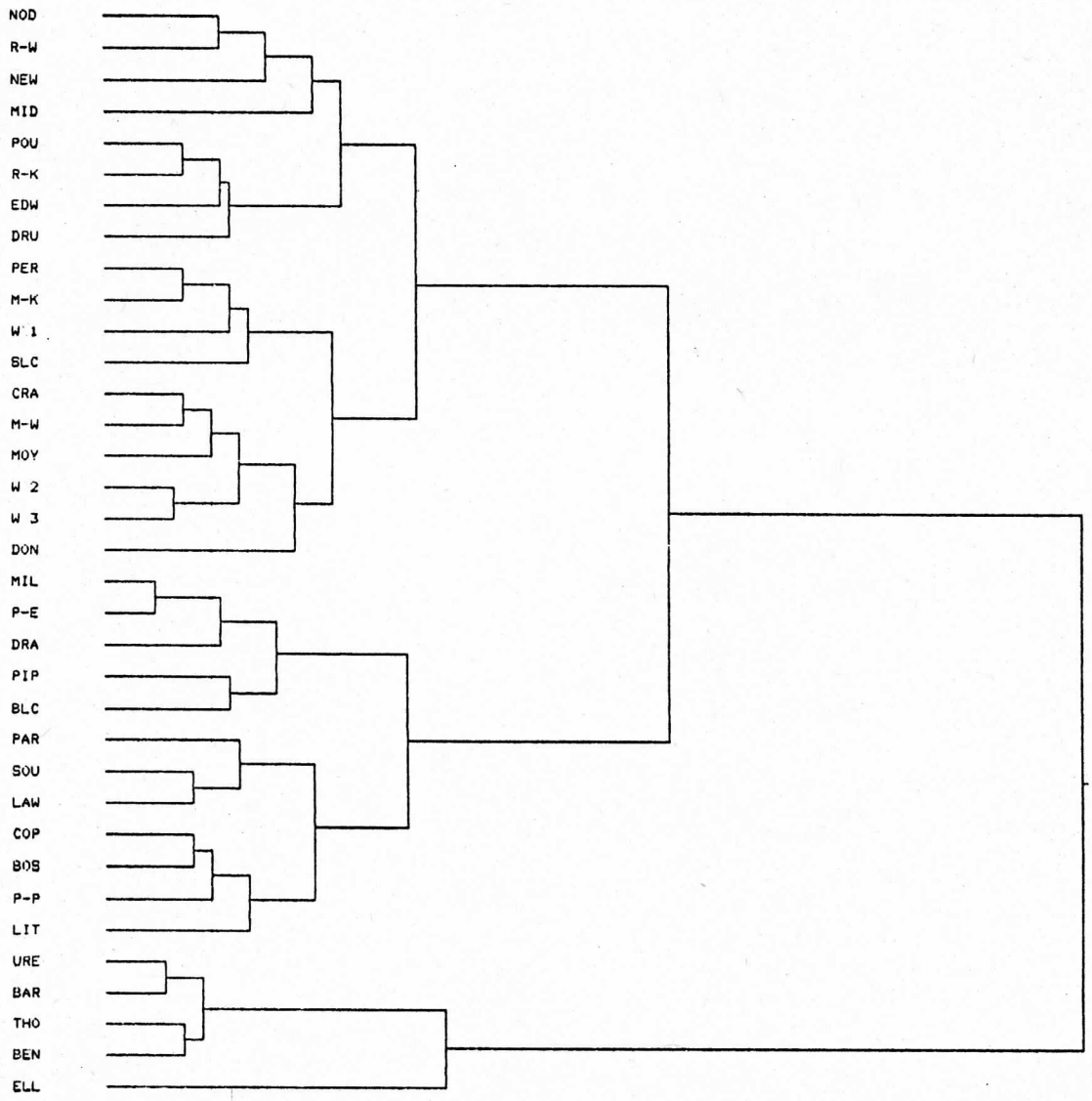

Figure 4: Group Average Cluster Analysis Using 3 Ceramic Classes

The four major site clusters suggested by Figures 3, 4 and 5 are reasonably good period groupings, with Cluster 1 (Figure 5) being the earliest and Cluster 4 the latest. This can be seen by considering the radio-carbon dates for the sites.

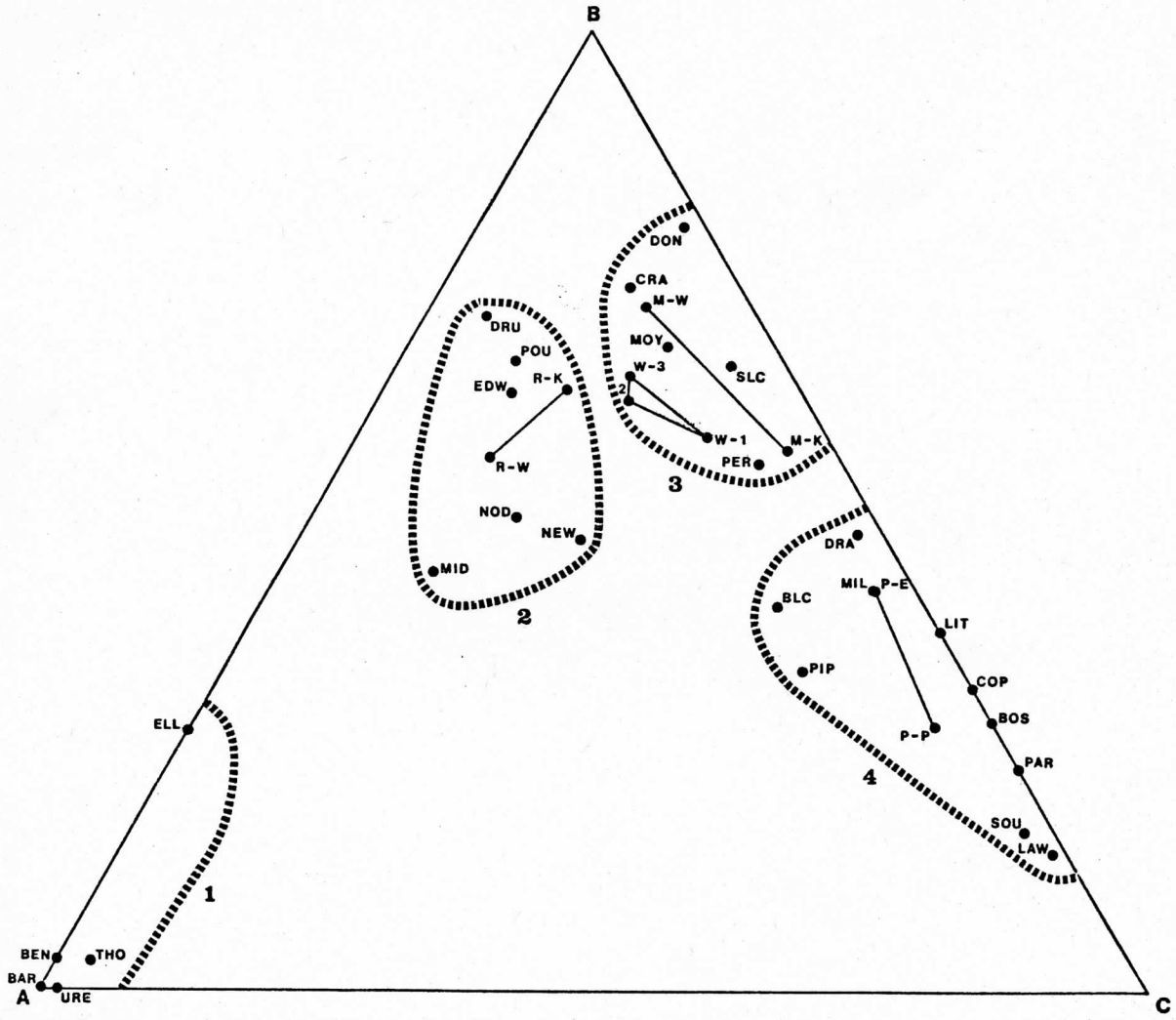

Figure 5: Triangular Co-ordinate Graph of 3 Ceramic Classes
(Type Class Key: A = #1, B = #2, C = #3.
Group numbers as listed on page 12.)

Cluster 1 The sites in this cluster have been variously labelled as Pickering, early Middleport and Uren Substage. Apparently these subtle distinctions made little difference to the people who lived on these sites. The two dated components used here have similar radio-carbon determinations: Uren 1125 ± 70, 1250 ± 70, 1270 ± 70, 1300 ± 60; Bennett A.D. 1260 ± 130, 1280 ± 100 (these and all subsequent dates have been taken from the compilation in Fox, 1983). A date range rounded to the nearest 50 years of 1200-1300 A.D. is consistent with the radio-carbon dates for Cluster 1 sites.

Cluster 2 This cluster includes the Middleport site itself, which unfortunately has never been dated. Radio-carbon dates exist for three sites: Edwards A.D. 1250 ± 80, 1260 ± 100; New 1310 ± 85; Nodwell A.D. 1340 ± 75. Sites of Cluster 2 would then appear to fall into the A.D. 1250-1350 period (the overlap with the dates given to the previous cluster represents imprecision introduced by both the inherent variation of the radio-carbon method and the vagarities of the ceramic type data).

Cluster 3 The only site with radio-carbon dates is Slack-Caswell with two readings of A.D. 1320 ± 60 and 1420 ± 35. Possible dates for Cluster 3 sites are 1350-1450 A.D., a range consistent with the A.D. 1435-1459 varve dates for Crawford Lake also in Cluster 3. The Wiacek site (all three analyses) fall into this cluster.

Cluster 4 This cluster consists of "Late Prehistoric" sites, four of which have radio-carbon dates: Pipeline A.D. 1405 ± 85; Lite A.D. 1450 ± 130; Lawson A.D. 1510 ± 100, 1710 ± 95; Draper A.D. 1360 ± 75, 1380 ± 95, 1455 ± 65, 1520 ± 85, 1545 ± 65, 1740 ± 80. A date range of 1400-1550 A.D. is consistent with the above data.

Conclusions

The various cluster analyses in the previous section were undertaken in an exploratory and experimental vein. Despite the apparently sophisticated quantitative apparatus, the simple method of plotting on a triangular graph gave results that were at least as good, and probably less misleading, than a cluster analysis of the full suite of types. Perhaps simpler is better, at least when, as with Iroquois pottery types, the data is inconsistently measured. Given the quality of the Iroquoian ceramic typology, only approximate results can be expected. Certainly more sophisticated methods of quantitative analysis can be applied to this type data, as they can be with any set of data regardless of quality, with, however, little being gained; perhaps nothing more than the allure of scientific method - but without science's precision.

It is easy enough to say that the type system should be entirely abandoned, for there are severe problems, but new difficulties emerge with attribute analysis as presently practiced. Indeed the problems encountered in type and attribute analysis are the opposites of one another. To put it simplistically: with MacNeish's types, analysts are using the same categories but making somewhat different decisions about their boundaries; in attribute analysis the decisions are (presumably) consistent but the categories are often different. It is no easy matter to match the attribute sets of one researcher with those of another. Obviously more rigour is needed in ceramic analysis but rigour has two aspects: 1) making consistent, objective decisions that others could make when faced with the same collection; 2) casting the resulting data in a form that is compatible with the work of others.

Returning to the Wiacek site, the foregoing analysis suggests that it is most similar to sites which can be assigned to an A.D. 1350-1450 time range. It will be interesting to compare these results with the dates from two carbon samples that have been submitted to Teledyne Isotopes. Perhaps then we will discover whether the present exercise has been of value in assessing Wiacek's chronological position or whether this is yet another example of misapplied pseudo-scientific quantophrenia, where a metric wrench has been used to strip an imperial bolt.

Acknowledgements

The authors would like to thank Bill Fox for his encouragement, as well as for producting Figures 1 and 5. "Sparky", with a bit of input from her friends, concocted Figures 2, 3, and 4. Finally, our thanks to Mary who stayed late (as usual) to complete typing of the manuscript.

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STATEMENT OF INCOME AND EXPENSES
FOR YEAR ENDING DECEMBER 31, 1983

Balance On Hand January 1, 1983		$ 684.96
Receipts for 1983		
Memberships	$ 908.33	
Bus Tour	985.00	
Donations	85.00	
Miscellaneous	110.00	
Sale of Kewa Copies	87.08	
Bank Interest	78.89	
	$2254.30	2254.30
Total Receipts		$2939.26
Disbursements		
O.A.S. Toronto Memberships	$ 300.00	
Bank Service Charge	7.35	
Printing and Postage for Kewa	625.00	
Picnic	184.79	
Guest Speaker Gratuities	40.00	
Chapter Dig Supplies	94.43	
Bus Tour Refunds	900.00	
Phone Bill re Bus Tour	22.67	
Dues Envelopes	58.85	
Postage and Supplies	13.13	
Refreshments	25.00	
Christmas Party	48.45	
Flowers	29.96	
10 P.A.S.T. Buttons	5.00	
Membership Windsor Chapter	3.00	
	$2357.63	
Total Disbursements	$2357.63	
Balance on Hand December 31, 1983	581.63	
	$2939.26	$2939.26

ACTIVITY QUESTIONNAIRE

FEBRUARY, 1984

1. Would you like to participate in a Chapter bus tour of archaeological sites, museums, etc.? Yes _____ No _____

2. *If so,* a/ how many days duration should the trip be? _____ days
   b/ what month would be best for you? _____
   c/ would you like to visit the Washington, D.C. vicinity? Yes _____ No _____

3. *If not,* what destination(s) would interest you? _____

   _____

4. Do you plan to attend our Chapter summer picnic? Yes _____ No _____

5. *If so,* a/ what date would you prefer? _____
   b/ would you be willing to host it? Yes _____ No _____

6. *If not,* where would you like to hold the picnic? _____

   _____

7. Are you interested in working on Chapter field projects? Yes _____ No _____

8. *If so,* a/ would you like to participate in the Dorchester Swamp Survey? Yes _____ No _____
   b/ would you excavate at the Harrietsville Earthwork? Yes _____ No _____
   c/ how many days could you volunteer over this season? _____ days

9. Do you wish to participate in collection processing (washing/cataloguing) and analysis? Yes _____ No _____

10. *If so,* a/ would you like to take on a project which would result in a KEWA article? Yes _____ No _____
    b/ how many days could you volunteer over this spring? _____ days

11. Do you have any suggestions concerning additional Chapter activities? No _____

    Yes, and they are _____

    _____

PLEASE TAKE THE TIME TO FILL OUT OUR QUESTIONNAIRE, AS ALL MEMBERS WILL BENEFIT FROM YOUR EFFORT. Forms can be turned in to Rob Pihl at our next Chapter meeting or folded (see other side), taped and sent to our business address.

NAME: _____

NINETEENTH CENTURY NOTES

HORSE HARNESS HARDWARE

THOMAS KENYON

The nineteenth century owes much to the horse. The early settlers preferred a medium weight horse that could pull the plow, draw the wagon, take the family to church in a buggy or sleigh or be ridden bareback or saddled. The most common harness piece found on nineteenth century sites are iron buckles. They are usually found corroded and distorted in shape, so the buckle illustrations (below) are shown as they might have been in their original state rather than as found.

1) Halter square. 2) Halter dee. 3,4,5,10) Single bar buckles. 6,7,8) Single bar common roller buckles. 9,14) Single bar hand forged buckles. 11,12,13) Double bar halter buckles. 15) Shaft fastener? 16) Screw cockeye. 17) Brass band terret. 18) Harness ring. 19) Bolt harness snap. 20) Round eye harness snap. 21) Brass buckle shield. 22,24) Whippletree end irons. 23) Whippletree centre iron. 25) Heel chain. 26) Hame clip. 27) Horse brass, crown motif.

All the artifacts shown below are from a number of nineteenth century sites in Brant, Wentworth and Haldimand counties that range in time from 1820 to 1900. Good pictorial references on harness hardware are: Eaton's Spring and Summer Catalogue 1901, Montgomery Ward and Co. Catalogue No. 56 1894-95.